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PROVISIONAL SPECIFICATION

Improvements in and relating to Food Tendering Machines

We, BERKEL AND PARNALL'S SLICING MACHINE MANUFACTURING COMPANY LIMITED, of Aden Road, Ponders End, Middlesex, England, a British Company, do hereby declare the nature of this invention which has been communicated to us by U.S. Slicing Machine Company, a Corporation organised under the Laws of the State of Indiana, United States of America, of La Porte, Indiana aforesaid, to be as follows:—

This invention relates to food tendering machines.

The invention comprises a food tendering machine having ultraviolet ray emitting apparatus to destroy any bacteria or other foreign organisms which might be lodged upon the food being worked upon by the machine.

The invention also comprises a food tendering machine incorporating ultraviolet ray emitting apparatus adapted to flood the interior food receiving portions of the machine with ultraviolet rays, thereby to destroy any bacteria or foreign organisms which may become lodged upon or within portions of the machine proper.

The invention also comprises a food tendering machine wherein ultraviolet ray emitting means are directed to a food article being operated upon within said food tendering machine and are prevented from escaping from the food tendering machine through an opening in which the food article is inserted.

Preferably, safety mechanism is provided in the machine to prevent operation of the ultraviolet ray emitting apparatus whenever the cover of the machine is opened.

Additional safety mechanism may be provided in the machine to prevent operation of the ultraviolet ray emitting apparatus even though the drive motor for the machine may be restarted when the cover is open.

In order that the nature of the invention shall be more clearly understood a meat tendering machine is shown in the accompanying drawings and will now be described with reference thereto. In the drawings:—

[Price 1/-]

Fig. 1 is a front elevation of a meat tendering machine with some of the parts broken away for the sake of clearness. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a right elevation of the machine with some of the parts broken away for the sake of clearness. Fig. 4 is a right elevation of the machine with some of the parts broken away and showing an alternative arrangement. Fig. 5 is a section on the line 5—5 of Fig. 4 with some of the parts broken away. Fig. 6 is a section on the line 6—6 of Fig. 5. Fig. 7 is an electrical diagram of the alternative embodiment according to Fig. 4.

In the drawings the invention is shown applied to meat tendering machines of a type in which the entire operating mechanism ordinarily is supported by and mounted within a base 11 and a cover 12, the base and cover preferably being made of light metal stampings and configured to be pleasing to the eye. The resulting assembly of the base and cover may be supported upon a plurality of rubber mounting feet 13, and hinges 14 are provided to offer access to the operating parts of the machine.

A bracket 15 is provided within the right-hand side of the cover 12, and a bracket 16 within the left-hand side of the cover. These two brackets preferably are spot welded to the interior spaces of the cover and form a support for a U-shaped ultraviolet ray emitting tube 17, referred to by our communicators abroad as a "Sterilamp." The Sterilamp 17 is mounted on the right-hand bracket 15 and secured by a plurality of screws 18, and the left-hand end of the Sterilamp is supported in suitably shaped recesses in the bracket 16. A U-shaped Sterilamp is selected so that the lamp may surround the food trough 19 of the tendering machine. The Sterilamp 17 is mounted above the lower end of the food trough 19 so that none of the ultraviolet rays emitted by the Sterilamp may gain direct outlet through the trough opening.

The operation of a tendering machine contemplates the insertion of a food article in the food trough 19 whence the food article passes between the knife assemblies

20 where it is tenderized. The position of the Sterilamp above the knife assemblies and the U-shape of the Sterilamp around the food trough 19 results in both sides of the food article being flooded with the rays from the Sterilamp when the food article passes from the trough 19 into the knife assemblies 20 and destroys any dangerous bacteria or similar organisms which may be lodged upon the food article. In addition, the rays from the Sterilamp flood the interior of the machine so as to destroy any bacteria or similar organisms therein, as for instance bacteria upon food particles which may have lodged between the blades of the knife assemblies 20.

Occasionally it is necessary for the operator to open the cover 12 of the food tendering machine to gain access to the operating parts. When the cover is open, the ultraviolet rays from the Sterilamp will be free to escape from the housing of the machine. Since these rays might be dangerous to the operator, either to his hands or eyes, or some other portion of his body, the Sterilamp is connected through a cover operated limit switch 23 which may be operated by any suitable mechanism, whereby it will be closed when the cover 12 is closed and opened when the cover 12 is opened. Occasionally such cover operated switches are used for the purpose of starting and stopping the operating mechanism of the food tendering machine, in which case one switch may be used to turn off both the Sterilamp and the operating motor when the cover is lifted.

A switch housing 21 is secured to the inside of the right wall of the base 11 and provides a housing for an off-on toggle switch 22 and a limit switch 23. The toggle switch 22 is inserted between the power supply line 24 and the motor line 25 to the drive motor 26 of the food tendering machine. The limit switch 23 is placed in series with one of the wires from the toggle switch 22 to the motor line 25. The current supply to the Sterilamp is in parallel with the motor line 25. The toggle switch 22 is the main off-on switch of the machine, and the limit switch 23 is used as a cover operated safety switch. Opening either switch shuts off the current supply both to the Sterilamp and to the motor and stops operation of the machine.

A bracket 27 is secured to the rear of the switch housing 21 and is supplied with a fulcrum 28 for a switch operating lever 29. The lower end of the lever 29 contacts an operating finger 30 upon the limit switch 23. When the operating finger 30 is depressed toward the switch 23, the switch is closed. When the operating finger 30 is released, a spring, mounted within the

housing of the limit switch 23, forces the operating finger 30 outwardly and opens the switch. As shown in Figs. 2 and 4, the operating finger 30 is urged inwardly when the lever 29 is moved in a clockwise direction and is released when the lever 29 is permitted to move in a counter-clockwise direction.

The lever 29 may be moved in its clockwise direction by an adjustable tappet 31 which is screwed into a nut 32. The nut 32 may be welded to a bracket 33 which is secured within the inner portion of the right-hand side of the cover. As the cover 12 is raised or lowered, it carries with it the tappet assembly. A ferrule 34 is placed around the shank of the tappet 31 so that the entire tappet assembly may be guided into a hole 35 in the base 11 of the machine. This ferrule tends to hold the cover rigid when it is closed.

The tappet 31 is adjusted so that when the cover is closed the tappet will urge the lever 29 in a clockwise direction sufficiently far to operate the finger 30 to close the limit switch 23. Opening of the cover 12 removes the tappet 31 from contact with the lever 29 and permits the internal spring within the limit switch 23 to move the finger 30 outwardly and to shift the lever 29 in a counter-clockwise direction, whereby the limit switch opens.

A hand control knob 36 may be moved to the right (see Figs. 5 and 6) to shift the lever 29 in its clockwise direction to close the limit switch 23. The hand control knob 36 is provided with an extension which extends through a slot 38 in the base 11 and which is securely fastened to a slidable actuating block 39 is slidably mounted within a pair of brackets 40 and 41 which are secured to the base 11. This actuating block is provided with a ramp portion 42 which is adapted to contact the lever 29. When the cover 12 is opened, the entire tappet assembly, including the tappet 31, will be removed from contact with the lever 29 and the lever will be permitted to move forwardly, thereby opening the limit switch 23. If, under these conditions, the hand knob 36 then is moved toward the right, the ramp 42 on the block 39 will urge the lever arm 29 rearwardly, thus closing the limit switch 23 and reconnecting the Sterilamp and the drive motor of the machine.

In order to prevent any harmful effects to the operator which might result from a relighting of the Sterilamp, a hand operated off-on switch 44 is provided in the primary circuit of the transformer 45 which provides the operating current for the Sterilamp. When the cover 12 is opened and the operator contemplates a restarting of the drive motor 26 through

the operation of the hand control knob 36, the operator will first turn off the off-on switch 44 so that the Sterilamp 17 will not be relighted.

- 5 Occasionally the operator may forget to turn off the off-on switch 44 and in the absence of safety means might be injured accidentally when he restarted the machine with the cover open. To prevent
10 this, an alternative toggle switch 46 may be inserted in the line 49, 50 from the limit switch 23 to the transformer 45. The toggle switch 46 is supported on the inside of the base 11 and is mounted below the
15 block 39. The operating knob of the toggle switch 46 extends into an inverted U-shaped groove 47 on the lower side of the block 39. When the block 39 is in its left-hand position, the switch 46 is closed, and when the block 39 is moved to its
20 right-hand position, the switch 46 will be opened. Accordingly, if the operator should move the hand control knob 36 to its right-hand position to close the limit switch 23, he will simultaneously open the toggle switch 46 so that no current will flow to the transformer 45.

- The wiring diagram for the circuit which utilizes the additional toggle switch 46 is illustrated in Fig. 7. Current from
30 the upper wire of the power supply line 24 goes through the upper element of the off-on toggle switch 22, the line 48, the limit switch 23, and one of the wires of the motor line 25, to the motor 26. Current returns to the line via the other wire of the motor line 25 and the lower element of the off-on toggle switch 22 to the lower wire of the power supply line 24. In addition,
40 power is supplied to the Sterilamp through a circuit commencing with a wire 49 which receives its current from the limit switch 23. Current passes from the wire 49 through the toggle switch 46 and the wire
45 50 to one side of the primary of the transformer 45. The return from the other side of the primary of the transformer is by way of wire 51, the off-on switch 44 and wire 52 to the lower element of the off-on toggle switch 22. If it is not desired to take advantage of the additional safety afforded through the use of the toggle switch 46, the switch 46 and wires 49 and
50 50 may be removed and may be replaced by wire 53, as is shown in Fig. 3.

It will be seen that the food tendering machine described comprises a plurality

of knife assemblies, a housing for the machine parts, an opening in said housing having wall portions extending toward
60 said knife assemblies, and ultraviolet ray emitting means mounted adjacent said knife assemblies and mounted around said wall portions, said emitting means being adapted to emit ultraviolet rays upon a
65 food article being processed by said food tendering machine, whereby bacteria on said food article are destroyed, and said wall portions being so constructed and arranged that they prevent escape of the
70 ultraviolet rays through the opening in the housing.

The machine described also comprises a movable cover, a drive motor, ultraviolet ray emitting means, switch mechanism operated by the cover and adapted to disconnect the drive motor and the ultraviolet ray emitting means from a source of electrical power when the cover is opened, and hand operated auxiliary
75 mechanism operable when the cover is opened and adapted to reconnect the drive motor to the source of electrical power and to simultaneously disconnect the ultraviolet ray emitting means from the source of electrical power, said auxiliary mechanism including an auxiliary switch in the electrical circuit to the ultraviolet ray emitting means, said switch being mechanically connected with the hand
80 operated mechanism.

The machine described also includes speed control mechanism for its alternating current motor comprising a saturable reactor, a generator driven by said motor,
85 means for energizing the direct current winding of said reactor inversely with respect to the output of said generator, and adjustable means adapted to vary the operative effectiveness of said energizing means, said speed responsive means comprising an alternating current generator, an amplifier excited by the output from said generator, a rectifier adapted to convert the output from said amplifier to
100 direct current, and a second amplifier excited by the direct current output from said rectifier.

Dated this 9th day of June, 1945.

H. D. FITZPATRICK & CO.,

Chartered Patent Agents,

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49, Chancery Lane, London, W.C.2.

COMPLETE SPECIFICATION

Improvements in and relating to Food Tendering Machines

We, BERKELE AND PARNALL'S SLICING
110 MACHINE MANUFACTURING COMPANY
LIMITED, of Aden Road, Ponders

End, Middlesex, England, a British Company, do hereby declare the nature of this invention which has been

communicated to us by U.S. Slicing Machine Company, a Corporation organised under the Laws of the State of Indiana, United States of America, of La Porte, Indiana aforesaid, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to food tendering machines.

The term "food tendering machine" is used in this specification, as customarily, to mean a machine of which the mechanism operates knife-like or tooth-like or other members adapted when operated to cut into an article of food and mechanically sever or break up the tissues of the food.

The invention comprises a food tendering machine having ultraviolet ray emitting apparatus to destroy any bacteria or other foreign organisms which might be lodged upon the food being worked upon by the machine.

The invention also comprises a food tendering machine incorporating ultraviolet ray emitting apparatus adapted to flood the interior food receiving portions of the machine with ultraviolet rays, thereby to destroy any bacteria or foreign organisms which may become lodged upon or within portions of the machine proper.

The invention also comprises a food tendering machine wherein ultraviolet ray emitting means are directed to a food article being operated upon within said food tendering machine, the rays being prevented from escaping from the food tendering machine through an opening in which the food article is inserted.

Preferably, safety mechanism is provided in the machine to prevent operation of the ultraviolet ray emitting apparatus whenever the cover of the machine is opened.

Additional safety mechanism may be provided in the machine to prevent operation of the ultraviolet ray emitting apparatus even though the drive motor for the machine may be restarted when the cover is open.

The invention also comprises a food tendering machine having a movable cover, ultraviolet ray emitting means under the cover, electrically driven operating mechanism for the machine, switch mechanism operated by said cover and adapted to disconnect the operating mechanism and the ray emitting means from a source of electrical power when the cover is opened, hand operated auxiliary mechanism operable when the cover is open and adapted to reconnect the operating mechanism to the source of electrical power and simultaneously to disconnect

the ultraviolet ray emitting means from its source of electrical power.

A food tendering machine will now be described by way of example with reference to the drawings which accompany our Provisional Specification and in which:—

Fig. 1 is a front elevation of the meat tendering machine with some of the parts broken away for the sake of clearness. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is a right elevation of the machine with some of the parts broken away for the sake of clearness. Fig. 4 is a right elevation of the machine with some of the parts broken away and showing an alternative arrangement. Fig. 5 is a section on the line 5—5 of Fig. 4 with some of the parts broken away. Fig. 6 is a section on the line 6—6 of Fig. 5. Fig. 7 is an electrical diagram of the alternative embodiment according to Fig. 4.

In the drawings the invention is shown applied to meat tendering machines of a type in which the entire operating mechanism ordinarily is supported by and mounted within a base 11 and a cover 12, the base and cover preferably being made of light metal stampings and configured to be pleasing to the eye. The resulting assembly of the base and cover may be supported upon a plurality of rubber mounting feet 13, and hinges 14 are provided to offer access to the operating parts of the machine.

A bracket 15 is provided within the right-hand side of the cover 12, and a bracket 16 within the left-hand side of the cover. These two brackets preferably are spot welded to the interior spaces of the cover and form a support for a U-shaped ultraviolet ray emitting tube 17, referred to by our communicators abroad and in this specification under the Trade Mark "Sterilamp." The Sterilamp 17 is mounted on the right-hand bracket 15 and secured by a plurality of screws 18, and the left-hand end of the Sterilamp is supported in suitably shaped recesses in the bracket 16. A U-shaped Sterilamp is selected so that the lamp may surround the food supply funnel 19 of the tendering machine. The Sterilamp 17 is mounted above the lower end of the funnel 19 so that none of the ultraviolet rays emitted by the Sterilamp may gain direct outlet through the funnel opening.

The operation of a tendering machine contemplates the insertion of a food article in the funnel 19 whence the food article passes between the knife assemblies where it is tenderized. The position of the Sterilamp above the knife assemblies and the U-shape of the Sterilamp around the funnel 19 results in both sides of the food article being flooded with the rays from the

Sterilamp when the food article passes from the funnel 19 into the knife assemblies 20 and destroys any dangerous bacteria or similar organisms which may be lodged upon the food article. In addition, the rays from the Sterilamp flood the interior of the machine so as to destroy any bacteria or similar organisms therein, as for instance bacteria upon food particles which may have become lodged between the blades of the knife assemblies 20.

Occasionally it is necessary for the operator to open the cover 12 of the food tendering machine to gain access to the operating parts. Since the ultraviolet rays might be dangerous to the operator, either to his hands or eyes, or some other portion of his body, the Sterilamp is connected through a cover operated limit switch 23 which may be operated by any suitable mechanism, whereby it will be closed when the cover 12 is closed and opened when the cover 12 is opened. Occasionally such cover operated switches are used for the purpose of starting and stopping the operating mechanism of the food tendering machine, in which case one switch may be used to turn off both the Sterilamp and the operating motor when the cover is lifted.

A switch housing 21 is secured to the inside of the right wall of the base 11 and provides a housing for a hand-operated off-on toggle switch 22 and a limit switch 23. The toggle switch 22 is inserted between the power supply line 24 and the motor line 25 to the drive motor 26 of the food tendering machine. The limit switch 23 is placed in series with one of the wires from the toggle switch 22 to the motor line 25. The current supply to the Sterilamp is in parallel with the motor line 25. The toggle switch 22 is the main off-on switch of the machine, and the limit switch 23 is used as a cover operated safety switch. Opening either switch shuts off the current supply both to the Sterilamp and to the motor and stops operation of the machine.

A bracket 27 is secured to the rear of the switch housing 21 and is supplied with a fulcrum 28 for a switch operating lever 29. The lower end of the lever 29 contacts an operating finger 30 upon the limit switch 23. When the operating finger 30 is depressed toward the switch 23, the switch is closed. When the operating finger 30 is released, a spring, mounted within the housing of the limit switch 23, forces the operating finger 30 outwardly and opens the switch. As shown in Figs. 3 and 4, the operating finger 30 is urged inwardly when the lever 29 is moved in a clockwise direction and is released when the lever 29 is permitted to move in a

counter-clockwise direction.

The lever 29 may be moved in a clockwise direction by an adjustable tappet 31 which is screwed into a nut 32. The nut 32 may be welded to a bracket 33 which is secured within the inner portion of the right-hand side of the cover. As the cover 12 is raised or lowered, it carries with it the tappet assembly. A ferrule 34 is placed around the shank of the tappet 31 so that the entire tappet assembly may be guided into a hole 35 in the base 11 of the machine. The ferrule neatly fits the hole 35 and therefore helps to hold the cover rigidly when it is closed.

The tappet 31 is adjusted so that when the cover is closed the tappet will urge the lever 29 in a clockwise direction sufficiently far to operate the finger 30 to close the limit switch 23. Opening of the cover 12 removes the tappet 31 from contact with the lever 29 and permits the internal spring within the limit switch 23 to move the finger 30 outwardly and to shift the lever 29 in a counter-clockwise direction, whereby the limit switch opens.

A hand control knob 36 may be moved to the right (see Figs. 5 and 6) to shift the lever 29 in its clockwise direction to close the limit switch 23. The hand control knob 36 is provided with an extension which extends through a slot 38 in the base 11 and which is securely fastened to a slidable actuating block 39 is slidably mounted within a pair of brackets 40 and 41 which are secured to the base 11. This actuating block is provided with a ramp portion 42 which is adapted to contact the lever 29. When the cover 12 is opened, the entire tappet assembly, including the tappet 31, will be removed from contact with the lever 29 and the lever will be permitted to move forwardly, thereby opening the limit switch 23. If, under these conditions, the hand knob 36 then is moved toward the right, the ramp 42 on the block 39 will urge the lever arm 29 rearwardly, thus closing the limit switch 23 and reconnecting the Sterilamp and the drive motor of the machine.

In order to prevent any harmful effects to the operator which might result from a relighting of the Sterilamp, a hand operated off-on switch 44 is provided in the primary circuit of the transformer which provides the operating current for the Sterilamp. When the cover 12 is opened and the operator contemplates a restarting of the drive motor 26 through the operation of the hand control knob 36, the operator will first turn off the off-on switch 44 so that the Sterilamp 17 will not be relighted.

Occasionally the operator may forget to turn off the off-on switch 44 and in the

absence of safety means might be injured accidentally when he restarted the machine with the cover open. To prevent this, an additional toggle switch 46 may be inserted in the line 49, 50 from the limit switch 23 to the transformer 45. The toggle switch 46 is supported on the inside of the base 11 and is mounted below the block 39. The operating knob of the toggle switch 46 extends into an inverted U-shaped groove 47 on the lower side of the block 39. When the block 39 is in its left-hand position, the switch 46 is closed, and when the block 39 is moved to its right-hand position, the switch 46 will be opened. Accordingly, if the operator should move the hand control knob 36 to its right-hand position to close the limit switch 23, he will simultaneously open the toggle switch 46 so that no current will flow to the transformer 45.

The wiring diagram for the circuit which utilizes the additional toggle switch 46 is illustrated in Fig. 7. Current from the upper wire of the power supply line 24 goes through the upper element of the off-on toggle switch 22, the line 48, the limit switch 23, and one of the wires of the motor line 25, to the motor 26. Current returns to the line via the other wire of the motor line 25 and the lower element of the off-on toggle switch 22 to the lower wire of the power supply line 24. In addition, power is supplied to the Sterilamp through a circuit commencing with a wire 49 which receives its current from the limit switch 23. Current passes from the wire 49 through the toggle switch 46 and the wire 50 to one side of the primary of the transformer 45. The return from the other side of the primary of the transformer is by way of wire 51, the off-on switch 44 and wire 52 to the lower element of the off-on toggle switch 22. If it is not desired to take advantage of the additional safety afforded through the use of the toggle switch 46, the switch 46 and wires 49 and 50 may be removed and may be replaced by wire 53, as is shown in Fig. 3.

It will be seen that the food tendering machine described comprises a plurality of knife assemblies, a housing for the machine parts, an opening in said housing having wall portions extending toward said knife assemblies, and ultraviolet ray emitting means mounted adjacent said knife assemblies and mounted around said wall portions, said emitting means being adapted to emit ultraviolet rays upon a food article being processed by said food tendering machine, whereby bacteria on said food article are destroyed, and said wall portions being so constructed and arranged that they prevent escape of the ultraviolet rays through the opening in

the housing.

The machine described also comprises a movable cover, a drive motor, ultraviolet ray emitting means, switch mechanism operated by the cover and adapted to disconnect the drive motor and the ultraviolet ray emitting means from a source of electrical power when the cover is opened, and hand operated auxiliary mechanism operable when the cover is opened and adapted to reconnect the drive motor to the source of electrical power and to simultaneously disconnect the ultraviolet ray emitting means from the source of electrical power, said auxiliary mechanism including an auxiliary switch in the electrical circuit to the ultraviolet ray emitting means, said switch being mechanically connected with the hand operated mechanism.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A food tendering machine as hereinafore defined having ultraviolet ray emitting apparatus to destroy any bacteria or other foreign organisms which might be lodged upon the food being worked upon by the machine.

2. A food tendering machine as hereinafore defined incorporating ultraviolet ray emitting apparatus adapted to flood the interior food receiving portions of the machine with ultraviolet rays, thereby to destroy any bacteria or foreign organisms which may become lodged upon or within portions of the machine proper.

3. A food tendering machine as hereinafore defined wherein ultraviolet ray emitting means are directed to a food article being operated upon within said food tendering machine, the rays being prevented from escaping from the food tendering machine through an opening in which the food article is inserted.

4. A food tendering machine as claimed by any preceding claim having safety mechanism to prevent operation of the ultraviolet ray emitting apparatus whenever the cover of the machine is opened.

5. A food tendering machine as claimed by claim 4 having additional safety mechanism to prevent operation of the ultraviolet ray emitting apparatus even though the drive motor for the machine may be restarted when the cover is open.

6. A food tendering machine as hereinafore defined comprising a plurality of knife assemblies, a housing for the machine parts, an opening in said housing having wall portions extending toward said knife assemblies, and ultraviolet ray emitting means mounted adjacent said

knife assemblies and mounted around said wall portions, said emitting means being adapted to emit ultraviolet rays upon a food article being processed by said food tendering machine whereby bacteria on said food article are destroyed, and said wall portions being so constructed and arranged that they prevent escape of the ultraviolet rays through the opening in the housing.

7. A food tendering machine as hereinbefore defined having a movable cover, ultraviolet ray emitting means under the cover, electrically driven operating mechanism for the machine, switch mechanism operated by said cover and adapted to disconnect the operating mechanism and the ray emitting means from a source of electrical power when the cover is opened, hand operated auxiliary mechanism operable when the cover is open and adapted to reconnect the operating mechanism to the source of electrical power and simultaneously to disconnect the ultraviolet ray emitting means from its source of electrical power.

8. A food tendering machine as hereinbefore defined having a movable cover, a drive motor, ultraviolet ray emitting means, switch mechanism operated by the cover and adapted to disconnect the drive motor and the ultraviolet ray emitting means from a source of electrical power when the cover is opened and hand

operated auxiliary mechanism operable when the cover is opened and adapted to reconnect the drive motor to the source of electrical power and simultaneously to disconnect the ultraviolet ray emitting means from the source of electrical power, said auxiliary mechanism including an auxiliary switch in the electrical circuit to the ultraviolet ray emitting means, said switch being mechanically connected with the hand operated mechanism.

9. A food tendering machine as claimed by claim 6, 7 or 8 having switch mechanism including a mechanically operated switch to open both a drive motor circuit and a ray emission circuit when the cover is open and manually operable switch means operable when the cover is open and adapted simultaneously to close the motor circuit and to open the ray emission circuit whereby the motor may be permitted to run, but the ray emitting means will be functionally ineffective when the cover is open.

10. A food tendering machine as hereinbefore defined substantially as hereinbefore described with reference to the drawings accompanying our Provisional Specification.

Dated this 26th day of November, 1946.

H. D. FITZPATRICK & CO.,
Chartered Patent Agents,
94, Hope Street, Glasgow, C.2, and
49, Chancery Lane, London, W.C.2.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1

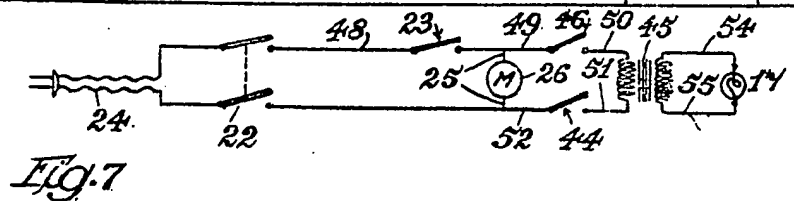
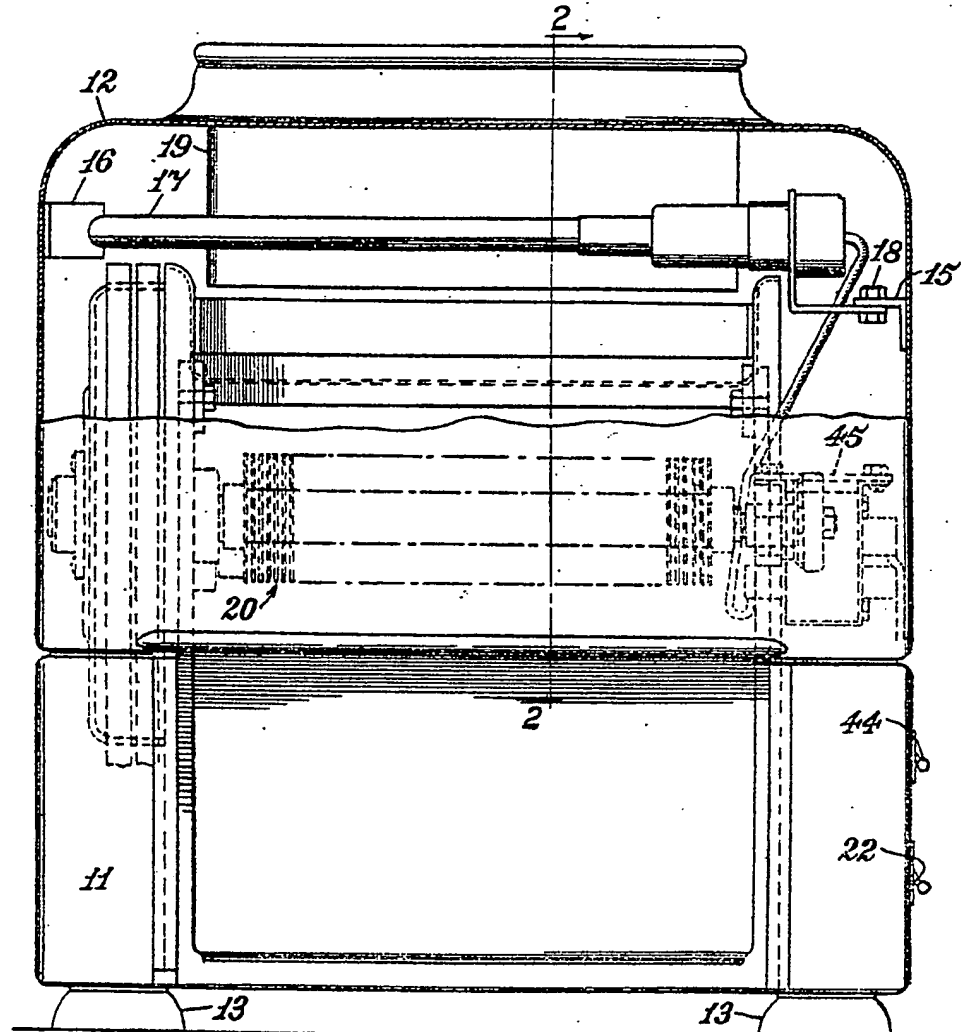


FIG. 1

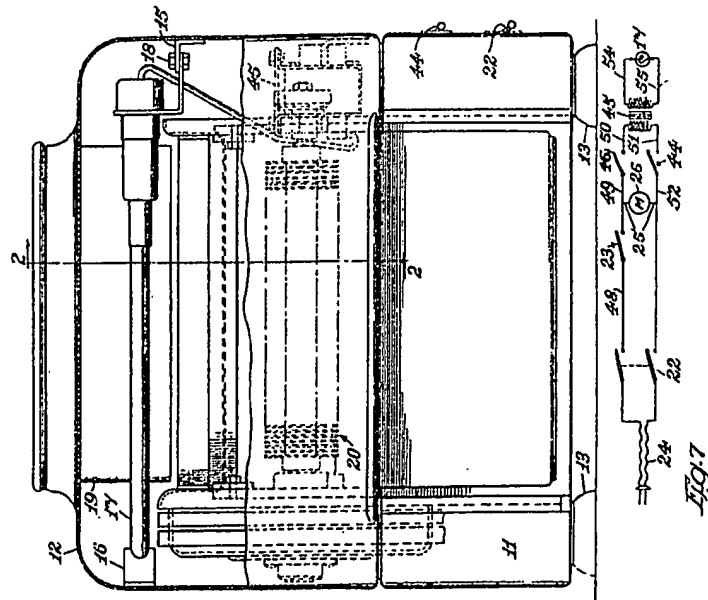


FIG. 1

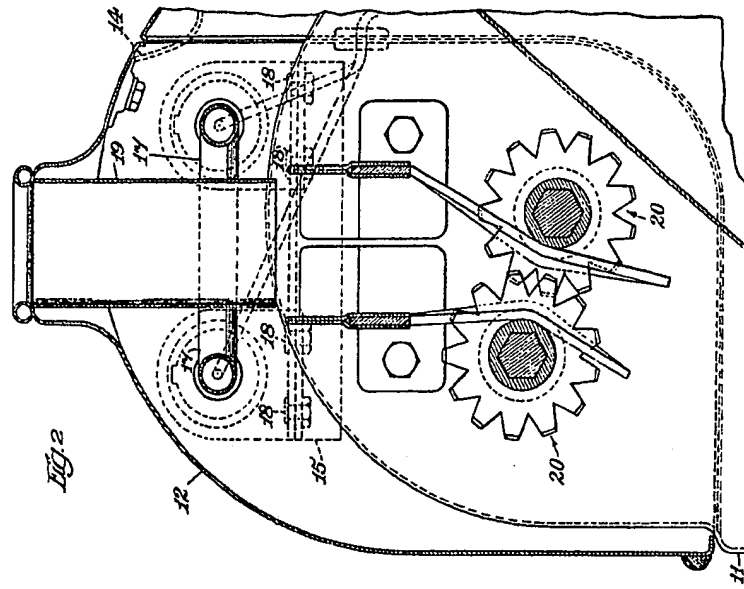
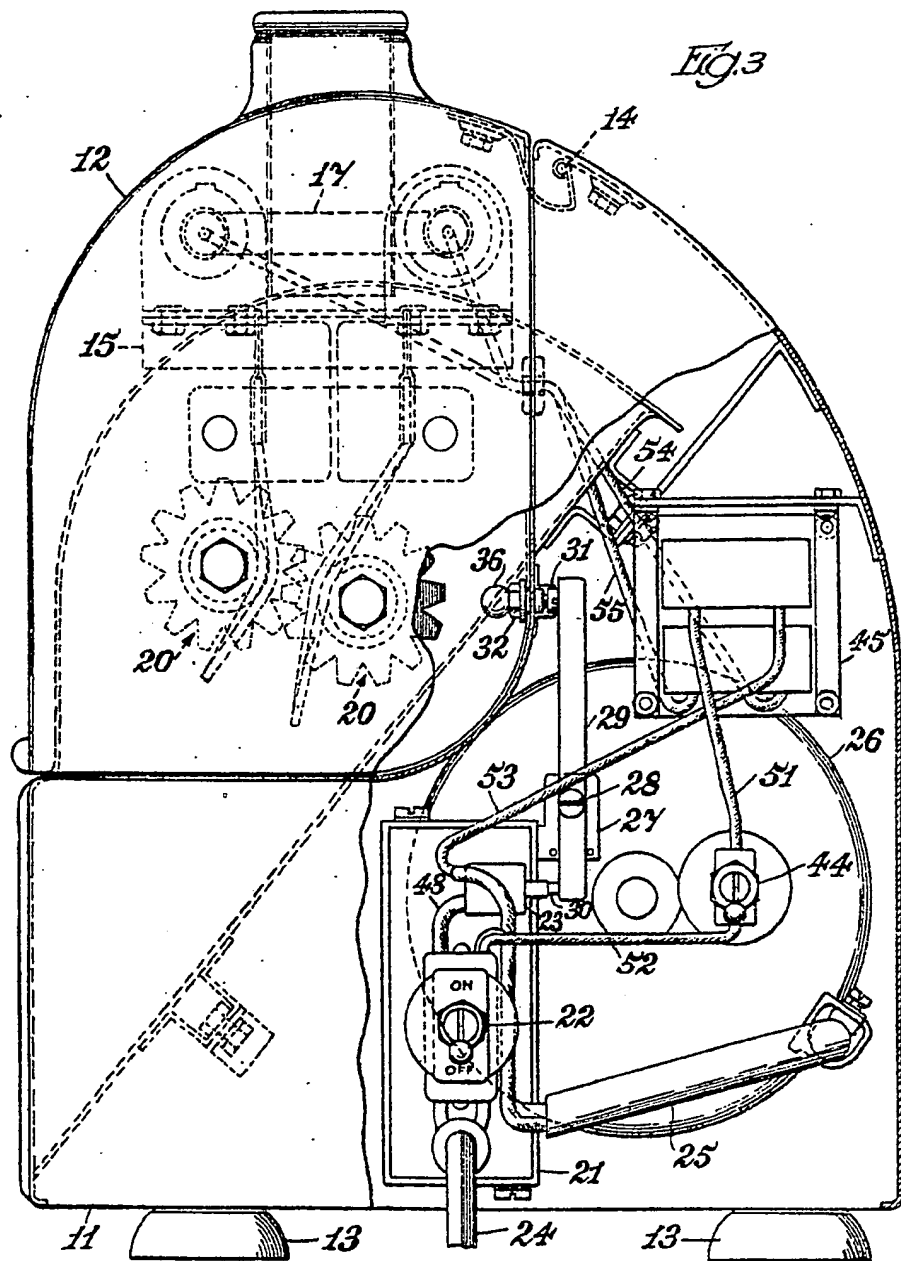
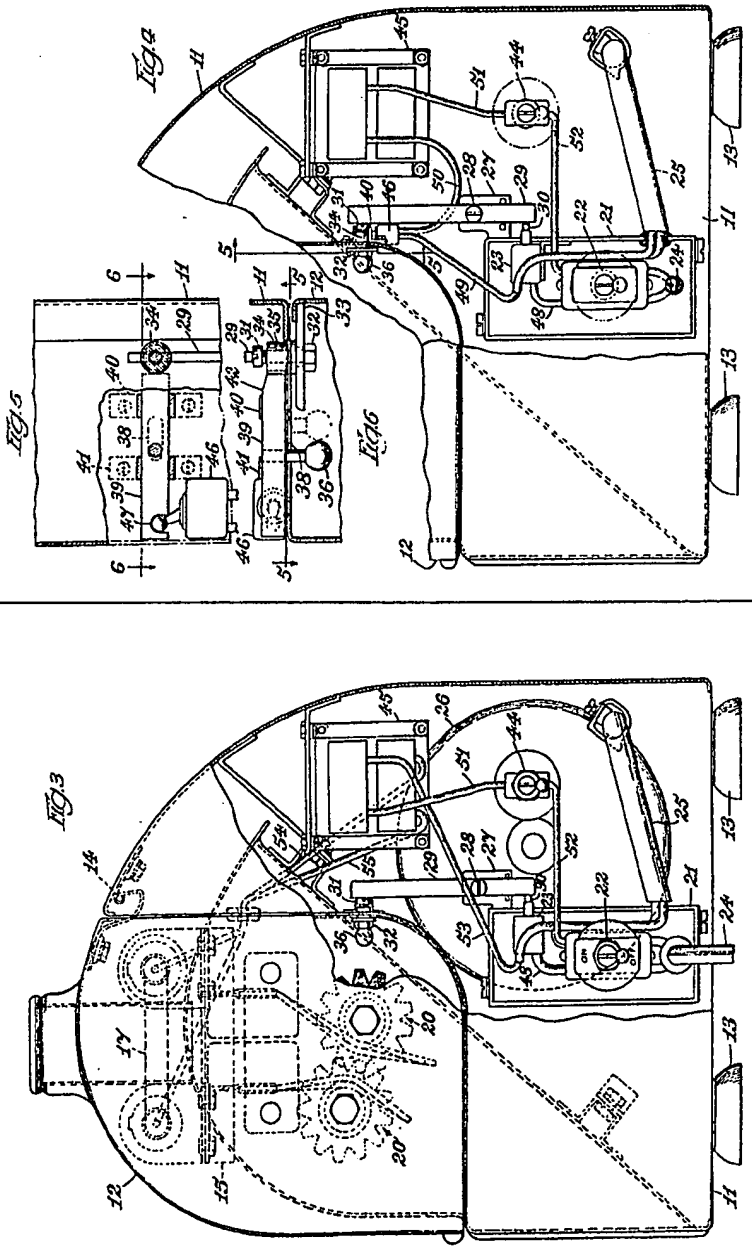


FIG. 2

[This Drawing is a reproduction of the Original on a reduced scale.]





[This Drawing is a reproduction of the Original on a reduced scale]